

RF Exposure Evaluation Report

Report No.: JYTSZ-R12-2600588

Applicant: Lumistar (Shanghai) Robotics Technology Co., Ltd.

Address of Applicant: Room 340, Building 1, No. 299 Zhongchen Road, Songjiang District, Shanghai

Equipment Under Test (EUT)

Product Name: TERO Smart Tennis Ball Machine/TERO PRO AI Tennis Ball Machine

Model No.: HYWT002, HYWS001

Trade mark: LUMISTAR

FCC ID: 2BTUN-HYWS001

Applicable standards: FCC CFR Title 47 Part 2 (§2.1091)

Date of sample receipt: 31 Jul., 2026

Date of Test: 01 Aug., to 20 Aug., 2026

Date of report issue: 21 Aug., 2026

Test Result: PASS

Project by:	<u>Luo Ping</u>	Date:	<u>21 Aug., 2026</u>
Reviewed by:	<u>Weto Wang</u>	Date:	<u>21 Aug., 2026</u>
Approved by:	<u>James Wei</u>	Date:	<u>21 Aug., 2026</u>
	Manager		

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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1 Version

Version No.	Date	Description
00	21 Aug., 2026	Original

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3 General Information

3.1 Client Information

Applicant:	Lumistar (Shanghai) Robotics Technology Co., Ltd.
Address:	Room 340, Building 1, No. 299 Zhongchen Road, Songjiang District, Shanghai
Manufacturer:	Lumistar (Shanghai) Robotics Technology Co., Ltd.
Address:	Room 340, Building 1, No. 299 Zhongchen Road, Songjiang District, Shanghai
Factory:	TENMA PRECISION (SHENZHEN) CO., LTD.
Address:	101, BUILDING D, NO. 2 NIKENG 3RD ROAD, XINLAN COMMUNITY, GUANLAN STREET, LONGHUA DISTRICT, SHENZHENCITY, GUANGDONG PROVINCE,CHINA

3.2 General Description of E.U.T.

Product Name:	TERO Smart Tennis Ball Machine/TERO PRO AI Tennis Ball Machine
Model No.:	HYWT002, HYWS001
Remark:	Model(HYWT002) and Model(HYWS001) were identical inside, the electrical circuit design,layout, components used and internal wiring, with only difference being(Differences in Product Appearance and Accessories).
BLE Specification	
Operation Frequency:	2402MHz-2480MHz
Channel number:	40
Channel separation:	2MHz
Modulation	GFSK
Antenna Type:	Internal Antenna
Antenna gain:	1.12 dBi (declare by Applicant)
UWB Specification	
Operation Frequency:	CH9: 7987.2 MHz
Channel Numbers:	1
Modulation Technology:	BPSK
Antenna Type:	Internal Antenna
Antenna Gain:	6.899 dBi (declare by applicant)
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

3.3 Disclaimer

Disclaimer:
For the information or data provided by the client in this report, the relevant results or conclusions of this report are only made for these data or information. The testing laboratory is not responsible for the authenticity and accuracy of these data or information.

3.4 Operating Modes

Operating mode	Detail description
BLE mode	Keep the EUT in continuously transmitting in BLE mode
UWB mode	Keep the EUT in continuously transmitting in UWB mode

3.5 Additions to, deviations, or exclusions from the method

No

3.6 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A.

● **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

3.7 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info-JYTee@lets.com, Website: <http://jyt.lets.com>

4 Technical Requirements Specification

4.1 Limits

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1310

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

4.2 Test Procedure

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the centre of radiation of the antenna

4.3 Result

Mode	Maximum power (dBm)	Maximum Output power (mW)	Antenna Gain (dBi)	Antenna Gain (numeric)	Distance (cm)	Result (mW/cm ²)	Limits for General Population/Uncontrolled Exposure (mW/cm ²)	Ratio
BLE	5.819	3.819	1.12	1.29	20.00	0.0009	1.0	0.001
UWB	-36.81	0.0002	6.899	4.90	20.00	0.0000002	1.0	2×10^{-7}

Simultaneous transmission(Worse mode):

ANT No.	Mode	Ratio	Total Ratio	Limit
Main ANT	BLE	0.001	0.001	1.00
Secondary ANT	UWB	2×10^{-7}		

Note: Just the worst case mode was shown in report.

4.4 Conclusion

The device is exempt from the SAR test and satisfies RF exposure evaluation.

-----End of report-----